

1. (Currently Amended) A fuel booster operable to compress a combustible fuel, the fuel booster comprising:

a compressor housing;

a compressor rotor;

a seal assembly coupled to the compressor housing, the seal assembly and the compressor housing cooperating to at least partially define a hermetically sealed compressor chamber;

a motor housing coupled to the seal assembly, the motor housing and the seal assembly cooperating to at least partially define a motor chamber that is sealed from the compressor chamber to prevent fluid flow therebetween; and

a motor including a motor rotor and a motor stator, the motor rotor and the compressor rotor contained within the compressor chamber, the motor rotor including a cylindrical surface, the motor stator substantially surrounding the cylindrical surface and contained within the motor chamber;

wherein the compressor rotor is a first compressor rotor, the fuel booster further comprising a second compressor rotor engaged with the first compressor rotor, the first compressor rotor and the second compressor rotor contained within the compressor chamber.

2. (Original) The fuel booster of claim 1, wherein the compressor housing includes a fuel inlet aperture and a fuel outlet aperture.

3. (Cancelled).

4. (Original) The fuel booster of claim 1, wherein the compressor rotor includes a drive portion that extends into the motor stator, and wherein the motor rotor includes an annular sleeve connected to the drive portion.

5. (Original) The fuel booster of claim 1, wherein the seal assembly includes a canister sized to cover the motor rotor and contact the compressor housing.
6. (Original) The fuel booster of claim 5, wherein the seal assembly includes an O-ring positioned between the canister and the compressor housing.
7. (Original) The fuel booster of claim 6, wherein the O-ring is compressed between the motor housing and the compressor housing when said housings are interconnected.
8. (Original) The fuel booster of claim 1, wherein the compressor housing includes an adapter plate connected to the motor housing.
9. (Original) The fuel booster of claim 1, wherein the compressor housing includes a discharge housing, the discharge housing receiving a flow of high-pressure fuel from the compressor rotor and discharging the high-pressure fuel flow to a combustor.
10. (Original) The fuel booster of claim 1, further comprising a variable frequency drive operable to drive the motor at a desired speed.
11. (Original) The fuel booster of claim 1, further comprising a cooling fan motor operable to drive a cooling fan independent of the motor to cool the motor.
- 12-28 (Withdrawn).

29. (New) A fuel booster operable to compress a combustible fuel, the fuel booster comprising:

a compressor housing;

a compressor rotor;

a seal assembly coupled to the compressor housing, the seal assembly and the compressor housing cooperating to at least partially define a hermetically sealed compressor chamber;

a motor housing coupled to the seal assembly, the motor housing and the seal assembly cooperating to at least partially define a motor chamber that is sealed from the compressor chamber to prevent fluid flow therebetween;

a motor including a motor rotor and a motor stator, the motor rotor and the compressor rotor contained within the compressor chamber, the motor rotor including a cylindrical surface, the motor stator substantially surrounding the cylindrical surface and contained within the motor chamber; and

a cooling fan motor operable to drive a cooling fan independent of the motor to cool the motor.

30. (New) The fuel booster of claim 29, wherein the compressor housing includes a fuel inlet aperture and a fuel outlet aperture.

31. (New) The fuel booster of claim 29, wherein the compressor rotor is a first compressor rotor, the fuel booster further comprising a second compressor rotor engaged with the first compressor rotor, the first compressor rotor and the second compressor rotor contained within the compressor chamber.

32. (New) The fuel booster of claim 29, wherein the compressor rotor includes a drive portion that extends into the motor stator, and wherein the motor rotor includes an annular sleeve connected to the drive portion.

33. (New) The fuel booster of claim 29, wherein the seal assembly includes a canister sized to cover the motor rotor and contact the compressor housing.

34. (New) The fuel booster of claim 33, wherein the seal assembly includes an O-ring positioned between the canister and the compressor housing.

35. (New) The fuel booster of claim 34, wherein the O-ring is compressed between the motor housing and the compressor housing when said housings are interconnected.

36. (New) The fuel booster of claim 29, wherein the compressor housing includes an adapter plate connected to the motor housing.

37. (New) The fuel booster of claim 29, wherein the compressor housing includes a discharge housing, the discharge housing receiving a flow of high-pressure fuel from the compressor rotor and discharging the high-pressure fuel flow to a combustor.

38. (New) The fuel booster of claim 29, further comprising a variable frequency drive operable to drive the motor at a desired speed.